R·I·T	Title: Cee Spin Coat Station
Spinner	
Semiconductor & Microsystems	
Fabrication Laboratory **Revision**: C	**Rev Date: 05/12/2020**

Approved by:

_____ /   /   _____ /   /
   Process Engineer   Equipment Engineer

1   SAFETY PRECAUTIONS

1.1   Hazards to the Operator
1.1.1   **Chemical Hazard** - Read the materials safety data sheets for the materials that will be used. Make sure that the lid is closed before spinning a wafer and avoid contact with resist.
1.1.2   **Spinning Wafers** - Wear safety glasses at all times.

1.2   Hazards to the Tool
1.2.1   **Allen Screw** - When changing the chuck between 4 and 6 inch, there is a special screw that must be removed from the chuck with an Allen wrench. The screw has a vacuum port in it and if lost, must be replaced with the same type.
1.2.2   **Cleaning** - Make sure that the waste bowl, lid and chuck are clean. See cleaning instructions. The user is responsible for cleaning the bowl.

2   INITIAL STATE CHECKS

2.1   To turn on hood lights, turn on light switch located on the outside upper left of the hood. This will illuminate hood lights.
2.2   Ensure both temperature displays for the hotplates are on. If not on depress the ON/OFF button for each hot plate. (See images 2 & 3)
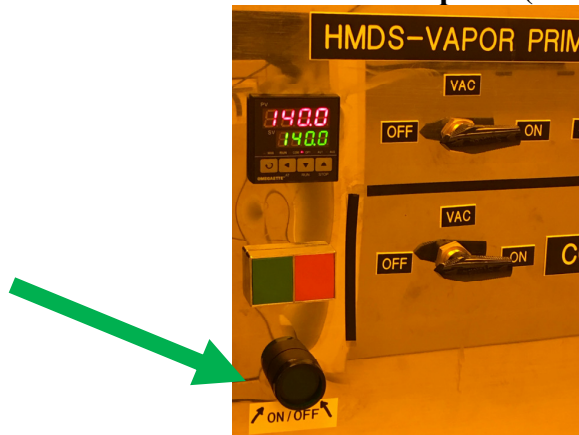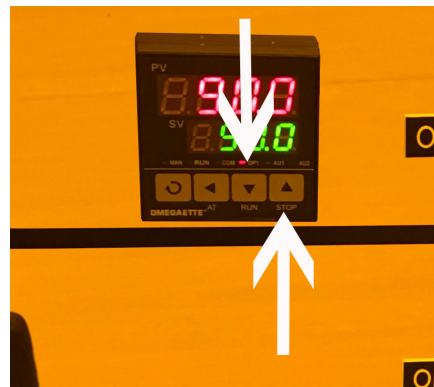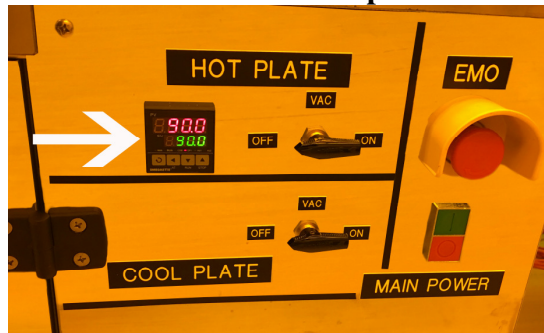

Image 2   Image 3

2.3   **If using the soft bake hot plate on the right side of the bench, set the desired temperature using the UP/DOWN ARROWS on the temperature display. It may take several minutes to stabilize at set point.**
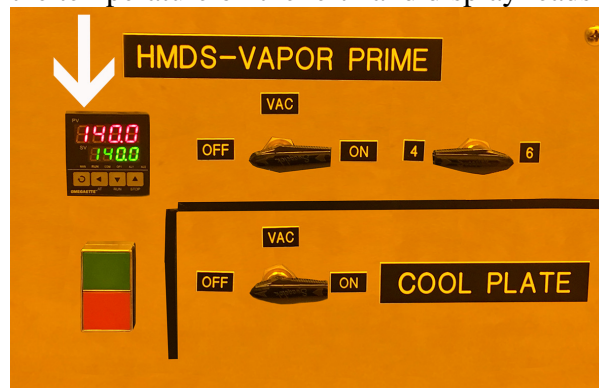
3   HMDS VAPOR PRIME
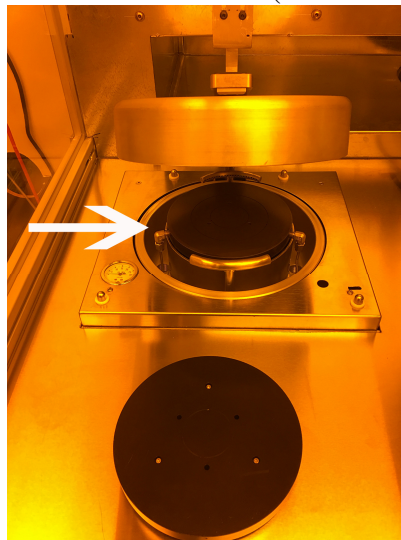
3.1   Vapor Prime Oven (panel 1)

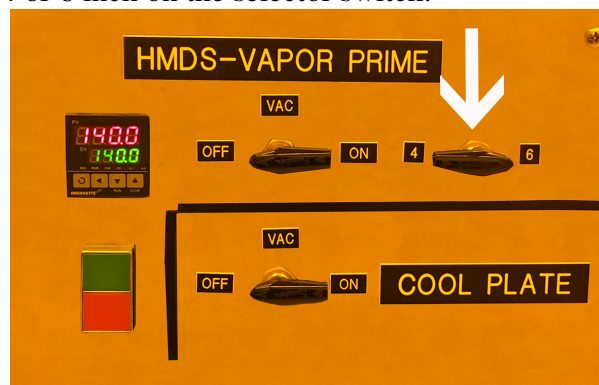3.1.1   Ensure the bench is card swiped in.

3.1.2   Ensure the temperature on the left hand display reads 140°C.
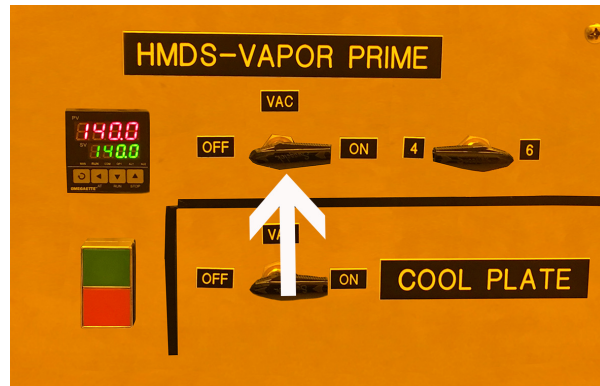

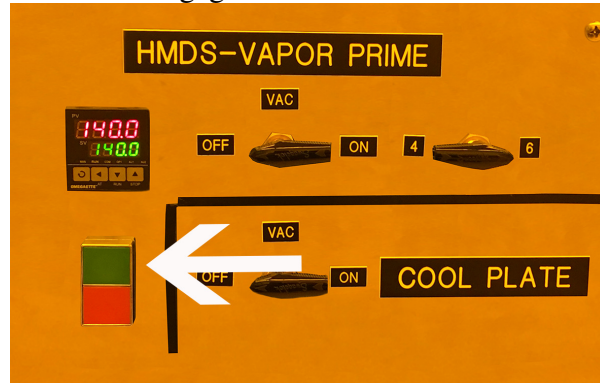3.1.3   Place the wafer in the HMDS oven (left hand side of bench)

3.1.4   Select 4 or 6 inch on the selector switch.

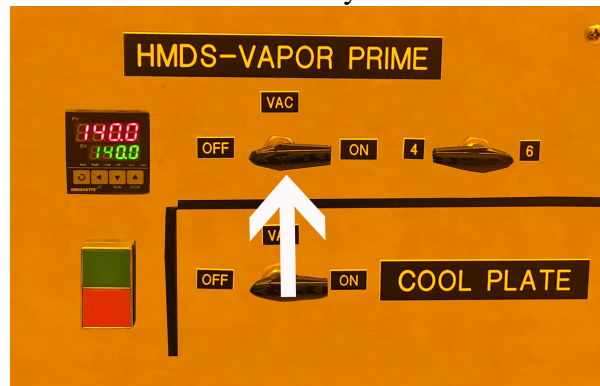3.1.5   Turn on the vacuum for the HMDS oven.

3.1.6   Press the GREEN button to start the process. The lid should close and after a few seconds the vacuum gage on the oven should read about 17 inches of vacuum.
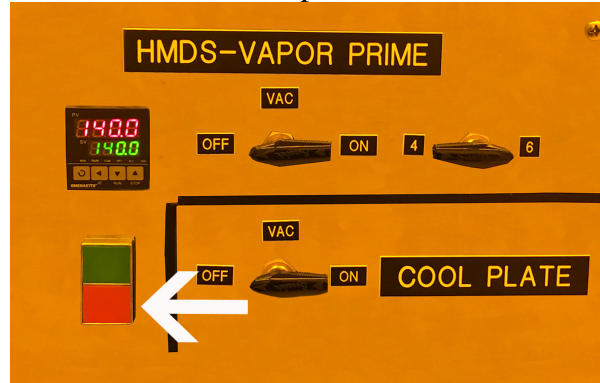

3.1.7   The automated program is now running, wait for the lid to open.
3.1.8   Turn off the vacuum and remove your wafer.

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3.1.9   If you have any issues and need to stop the process and remove your wafer press the RED button on the HMDS Vapor Prime Panel

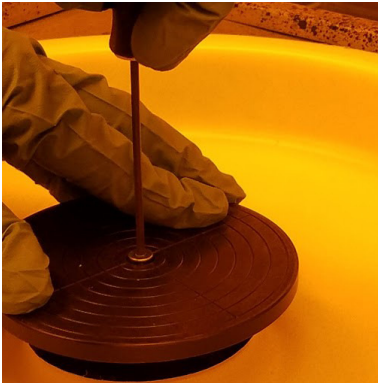# 4   <u>INSTRUCTIONS</u> for <u>Spinner</u>

4.1   **Make sure that the bowl is clean before starting a run and when finished.**

4.2   **This spinner is equipped with the Universal Chuck System.**

4.3   **To change chucks, hold the base fixture.**

4.4   **Remove the center screw from the 4" or 6" chucks with the 3/32" Allen driver provided. Smaller chucks don't have the center screw.**
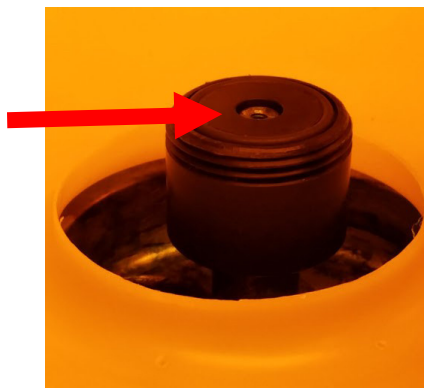
4.5 **Then unscrew chuck from the base fixture and screw the desired chuck onto the base fixture.**

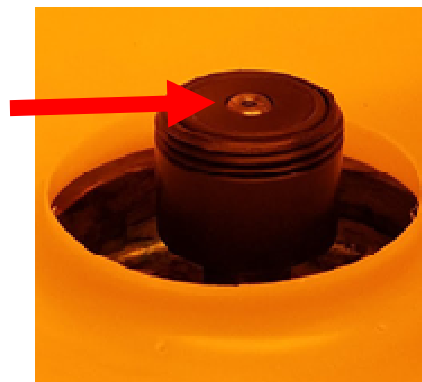**4.6** **Install the center screw if using the 4" or 6" chuck.**

NOTE: If the base fixture comes off, align the pin on the shaft with the slot in the fixture and press the fixture down to the stop.

Not Set Correctly   Set Correctly

4.7 **Program Numbers**
4.7.1   There are 10 program spots (# 0-9)
4.7.2   **Program #0** is reserved for the standard 4 inch wafer program.

     4.7.3   **Program #1** is reserved for the standard 6 inch wafer program.
     4.7.4   **Program #9** is open for general use and may be changed by anyone.
     4.7.5   **Programs #2-8** may be signed out. These will be purged quarterly.

4.8   **Creating a Program**
     4.8.1   Press **Program**, put in the number and press **Enter**.
     4.8.2   Put in the speed for the first step and press **Enter**. (0-6000rpm)
     4.8.3   Put in the ramp rate for the first step and press **Enter**. (0-30,000)
     4.8.4   Put in the time for the first step and press **Enter**. (0-999sec)
     4.8.5   The program will advance to the next step. To end the program, press the **Clear** button while in the **Velocity** field.

4.9   **Running a Program**
     4.9.1   Make sure that the waste bowl is clean. Solvents should be disposed of in the waste jug and the manifest should be filled out.
     4.9.1   Press **Run**, put in the program number and press **Enter**. Close the lid and press **Start**. The system will do a vacuum check and 2 sec. spin. Dispense the resist, close the lid and press **Start** again to run the program.

4.10   **Stopping a Run**
     4.10.1 Press **Stop**.

4.11   **Resetting the System**
     4.11.1 Press the **Reset** button.

4.12   **Cleaning the System**
     4.12.1 When finished with a run, clean the bowl, lid and chuck.
     4.12.2 Use the Allen wrench to remove the screw. The screw has a vacuum port in it and if lost, must be replaced with the same type.
     4.12.3 Take the bowl to the hood and clean it with acetone. Any excess fluid should be disposed of in the solvent waste jar. The cleanwipes that have resist on them should be disposed of in the yellow solvent waste can.
     4.12.4 Replace the bowl and the chuck being careful to properly orient the chuck. Replace the Allen screw.

REVISION RECORD

Summary of Changes	Originator	Rev/Date
Original Issue	R. Battaglia	A - 02/01/18
Updated hotplate shutoff	R. Battaglia	B - 09-06-18
Updated hazards and format	O'Brien	C - 05/12/2020